

## **ABSTRACT**

A method for balancing traffic across paths connecting a network to the Internet using a fractional allocation strategy for distributing the traffic from a congested selected path. The strategy includes: (a) associating the paths  $j$  with a counter  $i$ ; (b) calculating the total initial  
5 selected path overload; (c) calculating the selected path load, wherein the load is equal to the initial selected path overload less the sum of the low capacity boundary for  $i$  path(s); (d) calculating the portion of the traffic on the selected path to be distributed using a bi-sectional search strategy; (e) distributing a portion of the traffic on the selected path to the other paths; and  
10 (f) stopping if there are no more paths ( $i = j$ ), otherwise increasing the numerical value of the counter by one (1) and go to step (c).